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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/826,954	04/15/2004	Manfred Schneegans	2001 P 17353 US	2275
48154	7590	08/30/2005	EXAMINER	
SLATER & MATSIL LLP 17950 PRESTON ROAD SUITE 1000 DALLAS, TX 75252			NGUYEN, JIMMY	
			ART UNIT	PAPER NUMBER
			2829	

DATE MAILED: 08/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/826,954	Applicant(s) SCHNEEGANS ET AL.	
	Examiner Jimmy Nguyen	Art Unit 2829	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 August 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2 - 4, 6, 8, 10 - 15, 18 - 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2 - 4, 6, 8, 10 - 15, 18 - 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Argument

1. Applicant's arguments filed 8/11/05 have been considered but with the following effect;

Because of claim 6 as presented in the previous amendment is substantively identical to the originally filed claim 6. Since the scope of the claim did not change, the examiner is hereby withdrawn the final rejection.

Further, the applicant argues that Smith does not disclose a probe needle but rather a connection spring to create uniform solder bumps or uniform contacting pressure as known from the chip on substrate packages. The examiner is hereby traversing this argument. The spring contact 15 is formed of an elastic conductive material (column 5 lines 5 – 10), which has the capability of conducting and transmitting electrical signal from one place to another, therefore it performs the same functions as the probe needle does. In addition, in the electrical technical field, anything that conduct, transmit electrical signal are considered a probe (a wire, sharp metal plate, spring contact, pogo pins, socket pins etc..) therefore the spring contact in the 537's patent is considered a probe. Moreover, the applicant fails to address a probe need in the claim language but instead it writes under the pre-ample of the claim and the pre-ample does not has any patentable weight.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 2 – 4, 6, 8, 10, 18 – 20 are rejected under 35 U.S.C. 102(E) as being anticipated by Smith et al (US 5,944,537).

As to claim 6, Smith et al disclose (fig 6) a probe needle for testing semiconductor chips comprising:

an elongated member (15); and

a contact tip (30) attached at one end of the elongated member (15), wherein at least a portion of the surface of the contact tip (30) is provided with a coating (TiN, column 9 lines 15 - 20) of a chemically inert, electrically conductive material (TiN, column 9 lines 15 - 20) that is hard relative to the material of surfaces of the semiconductor chips (14) to be contacted and

an adhesive layer of titanium (column 10 lines 19 – 25) arranged beneath the titanium nitride layer so that the adhesive layer is between the surface of the contact tip (30) and the titanium nitride layer (TiN).

As to claim 2, Smith et al disclose (fig 6) a probe needle wherein the elongated member (15) includes a fixed end (the end attached to pad 3) and a free end (the other end) and wherein the contact member (30) is attached at the free end (the other end).

As to claims 3, 8, Smith et al disclose (fig 6) a probe needle wherein the entire surface of the contact tip (30) is provided with the coating.

As to claim 4, Smith et al disclose (fig 6) a probe needle wherein the entire surface of the probe needle (15) is provided with the coating (TiN).

As to claim 10, Smith et al disclose (fig 6) a method for manufacturing a probe needle for testing semiconductor chips, the method comprising:

Providing a probe needle (15) that includes a contact tip (30);

Coating the probe needle (15) at least in the area of the contact tip (30) with a chemically inert, electrically conductive material (TiN) that is hard relative to the material of the contact surfaces of the semiconductor chips (14) to be contacted, wherein the coating comprise coating with titanium nitrides; and

Coating at least in the area of the contact tip (30) with a titanium layer (column 10 lines 19 – 25) prior to the coating with titanium nitride.

As to claim 18, Smith et al disclose (fig 6) a method of forming a semiconductor device, the method comprising:

Fabricating a semiconductor wafer to include a number of circuits (101, 14) and a number of pads (3)

Contacting a test probe (15) to at least one of the pads (3), the test probe (15) including a contact tip (30) that is coated with a chemically inert, electrically conductive material (TiN) that is hard relative to the at least one pad, wherein the test probe (15) includes a contact tip (30) that is coated with a layer of titanium (column 10 lines 19 – 25) and a layer of titanium nitride (TiN) overlying the layer of titanium; and

Performing an electrical test by applying a test signal to the semiconductor wafer (14) through the test probe (15).

As to claims 19, 20, , Smith et al disclose (fig 6) the method further comprising after performing an electrical test, packaging the SM and test IC.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 11 – 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al (US 5,944,537).

As to claims 11 - 15, It would have been obvious to one having an ordinary skill in the art at the time of the invention was made to use different method to coat the

Art Unit: 2829

probe needle for the purpose of providing the durability and reliability of the probe contact needle during the contact process.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy Nguyen whose telephone number is 571-272-1965. The examiner can normally be reached on M- F from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ramtez Nestor, can be reached on 571-272-2034. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jimmy Nguyen
8/22/2005


VINH NGUYEN
PRIMARY EXAMINER
A.U. 2829
08/25/05